IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A Rake receiver comprising:

a Rake filter coefficient estimator that computes channel coefficients of each received channel component, wherein the Rake filter coefficient estimator computes a Rake filter coefficient for each estimated channel coefficient, and wherein the Rake filter coefficient estimator selects one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics; and

an adaptable non-uniform Rake filter including multiple non-uniform tap delay filters to extract delay information from each selected Rake filter coefficient and to configure structure of the multiple non-uniform tap delay filters.

2. (Original) The Rake receiver of claim 1, wherein the Rake filter coefficient estimator selects the one or more Rake filter coefficients based on channel components having a most signal energy.

3. (Original) The Rake receiver of claim 1, wherein the Rake filter coefficient estimator selects a Rake coefficient having the most signal energy as a primary Rake filter component from the one or more Rake filter coefficients, wherein the Rake filter coefficient estimator applies a weighted criteria for selection of Rake coefficients corresponding to channel components occurring before and after the primary Rake filter component.

4. (Original) The Rake receiver of claim 3, wherein the Rake receiver applies the weighted criteria based on knowledge of a specific scenario of a Rake receiver application.

5. (Original) A Rake receiver for receiving one or more channel components from a transmitter and outputting a channel matched signal comprising:

a channel coefficient module that estimates channel coefficients of each received channel component from the transmitter;

a Rake filter coefficient module that computes a Rake filter coefficient for each estimated channel coefficient;

a Rake coefficient selector that selects one or more Rake filter coefficients from the computed Rake filter based on channel characteristics; and

an adaptable non-uniform Rake filter that extracts delay information from each selected Rake filter coefficient on a real time basis and configures structure of non-uniform tap delay filters, and wherein the adaptable non-uniform Rake filter combines the one or more channel components with associated delay information using the configured adaptable non-uniform Rake filter and outputs the adaptively channel matched signal.

6. (Original) The Rake receiver of claim 5, further comprising:

an SNR estimator that estimates SNR (signal-to-noise ratio); and

an SNR/Delay spread based selector that compares each of the selected one or more Rake filter coefficients to a first threshold SNR value with respect to the channel component having the most signal energy, wherein the adaptable non-uniform Rake filter selects a subset of Rake filter coefficients from the selected one or more Rake filter coefficients such that each of the one or more Rake filter coefficients in the subset have a signal energy higher than or equal to the first threshold SNR value with respect to the channel component having the most signal energy.

7. (Currently Amended) ~~The~~ A Rake receiver ~~of claim 6, further~~ for receiving one or more channel components from a transmitter and outputting a channel matched signal comprising:

a channel coefficient module that estimates channel coefficients of each received channel component from the transmitter;

a Rake filter coefficient module that computes a Rake filter coefficient for each estimated channel coefficient;

a Rake coefficient selector that selects one or more Rake filter coefficients from the computed Rake filter based on channel characteristics;

an adaptable non-uniform Rake filter that extracts delay information from each selected Rake filter coefficient on a real time basis and configures structure of non-uniform tap delay filters, and wherein the adaptable non-uniform Rake filter combines the one or more channel

components with associated delay information using the configured adaptable non-uniform Rake filter and outputs the adaptively channel matched signal;

an SNR estimator that estimates SNR (signal-to-noise ratio);

an SNR/Delay spread based selector that compares each of the selected one or more Rake filter coefficients to a first threshold SNR value with respect to the channel component having the most signal energy, wherein the adaptable non-uniform Rake filter selects a subset of Rake filter coefficients from the selected one or more Rake filter coefficients such that each of the one or more Rake filter coefficients in the subset have a signal energy higher than or equal to the first threshold SNR value with respect to the channel component having the most signal energy; and

a delay spread estimator to determine a channel spread using the input signal, wherein the SNR/Delay spread based selector compares the determined channel spread to a threshold spread value, wherein the adaptable non-uniform Rake filter does switches to a default Rake filter when the determined channel spread is below the threshold spread value.

8. (Currently Amended) The Rake receiver of claim ~~6~~ 7, wherein the Rake coefficient selector further selects default Rake filter coefficients from the selected subset of Rake filter coefficients and switches to a default Rake filter based on estimated SNR obtained from the SNR estimator, wherein the SNR/Delay spread based selector compares the estimated SNR to a second threshold SNR value and configures the adaptable non-uniform Rake filter structure using the default Rake filter coefficients when the estimated SNR is below the second threshold SNR value.

9. (Original) A Rake receiver using an adaptable non-uniform tap delay filters comprising:

a channel coefficient module estimates channel coefficients of each received channel component from a transmitter;

a Rake filter coefficient module computes a Rake filter coefficient for each estimated channel coefficient;

a Rake coefficient selector selects one or more Rake filter coefficients from the computed Rake filter based on channel characteristics;

an adaptable non-uniform Rake filter extracts delay information from each selected Rake filter coefficient on a real time basis and to configure structure of non-uniform tap delay filters, and wherein the adaptable non-uniform Rake filter to combine the one or more channel components with associated delay information using the configured adaptable non-uniform Rake filter and to output a adaptively channel matched signal; and

a demodulator to receive the adaptively channel matched signal and to output a decoded signal.

10. (Original) The Rake receiver of claim 9, wherein the adaptable non-uniform Rake filter configures register structures of the non-uniform tap delay filters.

11. (Original) The Rake receiver of claim 9, wherein the adaptable non-uniform Rake filter configures structure of multiplier bank of the non-uniform tap delay filters.

12. (Original) An apparatus comprising:

means for estimating channel coefficients of each received channel component from a transmitter;

means for computing a Rake filter coefficient for each estimated channel coefficient;

means for selecting one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics; and

means for extracting delay information from each selected Rake filter coefficient and configuring structure of non-uniform tap delay filters.

13. (Original) The apparatus of claim 12, wherein the means for extracting delay information configures register structures of the non-uniform tap delay filters.

14. (Original) The apparatus of claim 12, wherein the means for extracting delay information configures structure of multiplier bank of the non-uniform tap delay filters.

15. (Original) A system comprising:

a bus;

a processor coupled to the bus;

a memory coupled to the processor;

a network interface coupled to the processor and the memory; and

a Rake receiver coupled to the network interface and the processor, wherein the Rake receiver further comprising:

a channel coefficient module estimates channel coefficients of each received channel component from a transmitter;

a Rake filter coefficient module computes a Rake filter coefficient for each estimated channel coefficient;

a Rake coefficient selector selects one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics; and

an adaptable non-uniform Rake filter extracts delay information from each selected Rake filter coefficient and to configure structure of non-uniform tap delay filters, and wherein the adaptable non-uniform Rake filter to combine the one or more channel components with associated delay information using the configured adaptable non-uniform Rake filter and to output the channel matched signal.

16. (Original) The system of claim 15, further comprising: a demodulator to receive the channel matched signal and to output a decoded signal.

17. (Original) The system of claim 15, further comprising:

an SNR estimator to estimate a threshold SNR (signal-to-noise ratio) value; and

an SNR/Delay spread based selector compares each of the selected one or more Rake filter coefficients to the first threshold SNR value with respect to the channel component having the most signal energy, wherein the adaptable non-uniform Rake filter selects a subset of the one or more Rake filter coefficients such that each of the one or more Rake filter coefficients in the subset have a signal energy higher than or equal to the first threshold SNR value with respect to the channel component having the most signal energy.

18. (Currently Amended) ~~The~~ A system ~~of claim 15, further~~ comprising:

a bus;

a processor coupled to the bus;

a memory coupled to the processor;

a network interface coupled to the processor and the memory; and

a Rake receiver coupled to the network interface and the processor, wherein the Rake receiver further comprising:

a channel coefficient module estimates channel coefficients of each received channel component from a transmitter;

a Rake filter coefficient module computes a Rake filter coefficient for each estimated channel coefficient;

a Rake coefficient selector selects one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics; ~~and~~

an adaptable non-uniform Rake filter extracts delay information from each selected Rake filter coefficient and to configure structure of non-uniform tap delay filters, and wherein the adaptable non-uniform Rake filter to combine the one or more channel components with associated delay information using the configured adaptable non-uniform Rake filter and to output the channel matched signal; and

a delay spread estimator to determine a channel spread using the channel coefficients, wherein the SNR/Delay spread based selector compares the determined channel spread to a threshold spread value, wherein the adaptable non-uniform Rake filter does not configure structure of the non-uniform tap delay filters when the determined channel spread is below the threshold spread value.

19. (Original) A method comprising:

receiving one or more channel components from a transmitter;

estimating channel coefficients of each received channel component from the transmitter;

computing a Rake filter coefficient for each estimated channel coefficient;

selecting one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics;

extracting delay information from each selected Rake filter coefficient;

configuring structure of non-uniform tap delay filters based on the delay information; and

outputting an adaptively channel matched signal using the configured structure of non-uniform tap delay filters.

20. (Original) The method of claim 19, wherein selecting the one or more Rake filter coefficients comprises:

selecting a channel component having the most signal energy as a primary channel component from the one or more Rake filter coefficients;

applying a weighted criteria for Rake filter coefficients corresponding to channel components before and after the primary channel component; and

selecting the one or more Rake filter coefficients based on the applied weighted criteria.

21. (Currently Amended) ~~The~~ A method ~~of claim 19~~ comprising:

receiving one or more channel components from a transmitter;

estimating channel coefficients of each received channel component from the transmitter;

computing a Rake filter coefficient for each estimated channel coefficient;

selecting one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics;

extracting delay information from each selected Rake filter coefficient;

configuring structure of non-uniform tap delay filters based on the delay information; and

outputting an adaptively channel matched signal using the configured structure of non-uniform tap delay filters, wherein configuring the structure of non-uniform tap delay filters based on the delay information comprises:

estimating a SNR;

determining a second threshold SNR value based on the estimated SNR;

comparing each of the selected one or more Rake filter coefficients to the second threshold SNR value with respect to the channel component having the most signal energy; and

selecting a subset of the one or more Rake filter coefficients such that each of the one or more Rake filter coefficients in the subset have a signal energy higher than or equal to the second

threshold SNR value with respect to the channel component having a most signal energy.

22. (Currently Amended) The method of claim ~~19~~ 21, wherein configuring the structure of non-uniform tap delay filters based on the delay information comprises:

determining a channel spread using the channel coefficients;

comparing the determined channel spread to a threshold spread value; and

switching to a default non-uniform tap delay filter structure when the determined channel spread is below the threshold spread value.

23. (Original) An article comprising:

a storage medium having instructions that, when executed by a computing platform, result in execution of a method comprising:

receiving one or more channel components from a transmitter;

estimating channel coefficients of each received channel component from the transmitter;

computing a Rake filter coefficient for each estimated channel coefficient;

selecting one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics;

extracting delay information from each selected Rake filter coefficient;

configuring structure of non-uniform tap delay filters based on the delay information; and

outputting a channel matched signal using the configured structure on non-uniform tap delay filters.

24. (Original) The article of claim 23, wherein selecting the one or more Rake filter coefficients comprises:

selecting a channel component having the most signal energy as a primary channel component from the one or more Rake filter coefficients;

applying a weighted criteria for Rake filter coefficients corresponding to channel components before and after the primary channel component; and

selecting the one or more Rake filter coefficients based on the applied weighted criteria.

25. (Currently Amended) ~~The~~ An article ~~of claim 24~~ comprising:

a storage medium having instructions that, when executed by a computing platform, result in execution of a method comprising:

receiving one or more channel components from a transmitter;

estimating channel coefficients of each received channel component from the transmitter;

computing a Rake filter coefficient for each estimated channel coefficient;

selecting one or more Rake filter coefficients from the estimated channel coefficients based on channel characteristics, wherein selecting the one or more Rake filter coefficients comprises:

selecting a channel component having the most signal energy as a primary channel component from the one or more Rake filter coefficients;

applying a weighted criteria for Rake filter coefficients corresponding to channel components before and after the primary channel component; and

selecting the one or more Rake filter coefficients based on the applied weighted criteria;

extracting delay information from each selected Rake filter coefficient;

configuring structure of non-uniform tap delay filters based on the delay information; and

outputting a channel matched signal using the configured structure on non-uniform tap delay filters,

wherein configuring the structure of non-uniform tap delay filters based on the delay information comprises:

estimating a SNR;

determining a second threshold SNR value based on the estimated SNR;

comparing each of the selected one or more Rake filter coefficients to the second threshold SNR value with respect to the channel component having the most signal energy; and

selecting a subset of the one or more Rake filter coefficients such that each of the subset of the selected one or more Rake filter coefficients have a signal energy higher than or equal to the second threshold SNR value with respect to the channel component having the most signal energy.

26. (Currently Amended) The article of claim ~~24~~ 25, wherein configuring the structure of non-uniform tap delay filters based on the delay information comprises:

determining a channel spread using the selected subset of Rake filter coefficients;

comparing the determined channel spread to a threshold spread value; and

switching to a default non-uniform tap delay filter structure when the determined channel spread is below the threshold spread value.